

AMENDMENTS TO THE CLAIMS

1-39. (Canceled)

40. (Currently amended) An isolated nucleic acid molecule which comprises a sequence encoding a protein which inhibits osteoclast differentiation from haematopoietic cell precursors, selected from the group consisting of osteoclast inhibitory lectin (OCIL) and OCIL-related protein, and which either

(i) hybridizes ~~under conditions of moderate to high stringency~~ to one or more nucleotide sequences selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 33, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 44, SEQ ID NO: 45 and SEQ ID NO: 46 or selected from the group consisting of SEQ ID NO: 11, SEQ ID NO: 21, and SEQ ID NO: 37, at 65°C in a hybridization buffer containing 4 x SSPE, 5 x Denhardt's solution, 0.5% sodium dodecyl sulfate for 24 hr, followed by sequential washing in 2 x SSC at 65°C for 15 min, 2 x SSC with 0.1% SDS at 65°C for 30 min, and 0.1 x SSX at 65°C for 10 min; or

(ii) has greater than 80% sequence identity with one or more of the sequences set out in (i).

41. (Previously presented) The nucleic acid molecule according to claim 40, which encodes a type II membrane protein.

42. (Previously presented) The nucleic acid molecule according to claim 40, which is expressed at least by osteoblasts.

43. (Previously presented) The nucleic acid molecule according to claim 40, which is of human, mouse or rat origin.
44. (Previously presented) The nucleic acid molecule according to claim 40, which is cDNA.
45. (Previously presented) The nucleic acid molecule according to claim 44, in which said cDNA comprises a sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 33, SEQ ID NO: 36, SEQ ID NO: 44, SEQ ID NO: 45 and SEQ ID NO: 46.
46. (Currently amended) The nucleic acid molecule according to claim 40, which is a ~~gDNA~~ genomic DNA.
47. (Currently amended) The nucleic acid molecule according to claim 40, in which the ~~gDNA~~ genomic DNA comprises a sequence selected from the group consisting of SEQ ID NO: 11, SEQ ID NO: 21, and SEQ ID NO: 37, or which hybridizes to said nucleic acid molecule ~~under stringent conditions~~ at 65°C in a hybridization buffer containing 4 x SSPE, 5 x Denhardt's solution, 0.5% sodium dodecyl sulfate for 24 hr, followed by sequential washing in 2 x SSC at 65°C for 15 min, 2 x SSC with 0.1% SDS at 65°C for 30 min, and 0.1 x SSC at 65°C for 10 min.
48. (Currently amended) The nucleic acid molecule according to claim 40, which encodes an extracellular domain of an OCIL or of an OCIL-related protein.

49. (Currently amended) The nucleic acid molecule according to claim 40, which encodes a protein which inhibits ~~inhibits~~ differentiation of haematopoietic stem cells in osteoclast progenitor cells.
50. (Withdrawn) The nucleic acid molecule according to claim 40 to 10, which comprises 110 base pair sequence as set out in SEQ ID NO: 2.
51. (Previously presented) An isolated nucleic acid molecule directed against a nucleic acid molecule according to claim 40.
52. (Previously presented) The isolated sequence according to claim 51, directed against SEQ ID NO: 10.
53. (Previously presented) The isolated sequence according to claim 51, which is SEQ ID NO: 24 or SEQ ID NO: 25.
54. (Previously presented) An isolated polypeptide encoded by the nucleic acid molecule of claim 40.
55. (Previously presented) An antibody directed against the polypeptide of claim 54.
56. (Currently amended) A method of treatment of a condition characterized by abnormal bone resorption, comprising the step of administering an effective amount of ~~a modulator of expression or function of a~~ the polypeptide according to claim 54 to a subject in need of such treatment.
57. (Withdrawn) A method of modulating breast and/or lymph node development, comprising the step of administering an effective amount of a modulator of expression or function of a polypeptide according to claim 54 to a subject in need of such treatment.

58. (Withdrawn) An oligonucleotide primer selected from the group consisting of sense primers having the sequence set forth in SEQ. ID. NO: 5, 6, 30, 35, 13, 14, 16, 18, 27, 47, 50, 52, 54, or 55, and antisense primers having the sequence set out in SEQ. ID. NO: 3, 31, 32, 14, 28, 34, 38, 39, 51, 53, 22, 23, 24, 25, 43, or 56.
59. (New) The isolated polypeptide according to claim 54 comprising a sequence selected from the group consisting of SEQ ID NO: 40, SEQ ID NO: 41 and SEQ ID NO: 42.
60. (New) The isolated polypeptide according to claim 59, comprising the sequence set out in SEQ ID NO: 40.
61. (New) The isolated polypeptide according to claim 54, which comprises an amino acid sequence encoded by SEQ ID NO: 20.
62. (New) The isolated polypeptide according to claim 54, whose expression is differentially regulated by PTH or PTHrP.
63. (New) The isolated polypeptide according to claim 54, which is encoded by the human cDNA or genomic DNA sequence.
64. (New) An isolated polypeptide selected from the group consisting of an extracellular domain, a transmembrane domain, and a cytoplasmic domain of the polypeptide according to claim 54.
65. (New) A method according to claim 56 in which the condition involves excessive bone resorption.
66. (New) A method according to claim 65, in which the condition is selected from the group consisting of osteoporosis, primary hyperparathyroidism, Paget's

disease, rheumatoid arthritis, renal osteodystrophy, humoral hypercalcaemia of malignancy, and conditions where cancer has metastasized to bone.

67. (New) A diagnostic kit for detection of abnormalities in the structure, expression or control of a type II membrane polypeptide expressed on the osteoblast cell surface, selected from the group consisting of osteoclast inhibitory lectin (OCIL) and OCIL-related protein, comprising a nucleic acid according to claim 40, or a fragment thereof capable of hybridizing to a nucleic acid according to claim 40.
68. (New) A diagnostic kit for detection of abnormalities in the structure, expression or control of a type II membrane polypeptide expressed on the osteoblast cell surface, selected from the group consisting of osteoclast inhibitory lectin (OCIL) and OCIL-related protein, comprising a polypeptide according to claim 54.
69. (New) A composition comprising a polypeptide according to any one of claim 54, together with a pharmaceutically-acceptable carrier.
70. (New) A method for treating a condition characterized by abnormal bone resorption, comprising administering an amount of the isolated nucleic acid molecule of claim 40 to a patient in need thereof, in an amount effective to treat said condition.